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Defense Acquisition: Ready for Reform?

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Defense Acquisition: Ready for Reform?

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Abstract

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With changing threats and shrinking budgets, how do senior leaders decide among the military ways and means to achieve defense ends? To support the United States' security strategy, leaders throughout the whole of government must consult a series of publications for guidance which stakeholders translate into required capabilities. Senior military leaders compare defense capabilities to requirements to determine gaps and associated risks, as well as how to mitigate them. In doing so, they must also consider international political expectations, changing external threats, ongoing economic stress, and waning domestic support for military intervention overseas. Effective resourcing for existing or new capabilities under these constraints requires a balance of strategic, political, and budgetary considerations to secure viable, timely, best-value solutions. The key question, then, is whether the current capability-based approach is effective in obtaining the best value for the nation's dollar with respect to capabilities and resources. This paper analyzes the current methodology used to determine military requirements and resource them, and offers potential ways to improve.

Defense Acquisition: Ready for Reform?

According to the United States Constitution, one of the key purposes of the national government is to provide for the defense of its citizens.[1] Domestic political and economic pressures have a direct effect on defense choices, but globalization has added international concerns to the decision-making process.[2] For the United States, it is a particularly complex and expensive mission to protect national interests. With changing threats and shrinking budgets, how do senior leaders decide among the military ways and means to achieve defense ends?

To support the United States' security strategy, leaders throughout the whole of government must consult a series of publications for guidance which stakeholders translate into required capabilities. Senior military leaders compare defense capabilities to requirements to determine gaps and associated risks, as well as how to mitigate them. In doing so, leaders must also consider international political expectations, changing external threats, ongoing economic stress, and waning domestic support for military intervention overseas.[3] To effectively resource existing or new capabilities under these constraints, senior leaders will need to balance strategic, political, and budgetary pressures to secure viable, timely, best-value solutions. Failure to do so will imperil our defense.

The executive branch publishes the *National Security Strategy*, which provides an azimuth for the whole of government by describing major national security concerns, how the President of the United States intends to address them, and overarching ends as they relate to enduring national interests.[4] Based on the *National Security Strategy* and the *Quadrennial Defense Review*, the Chairman of the Joint Chiefs of Staff publishes the *National Military Strategy of the United States*. It prioritizes the ways to

achieve our national ends using defense means, provides objectives and operational concepts, and serves as the foundation of subordinate strategies.[5] In January 2012, the President of the United States directed the Department of Defense to issue additional guidance to refine the 2010 *National Security Strategy*.[6] The resulting documents, "Sustaining U.S. Global Leadership: Priorities for the 21st Century Defense" and "Defense Budget Priorities and Choices," delineate priorities among competing demands for limited resources, and inform the decision-making process about manning, training, and equipping military forces to support the strategy. Subsequently, the Chairman of the Joint Chiefs of Staff published the "Chairman's Strategic Direction to the Joint Force" and the "Capstone Concept for Joint Operations: Joint Force 2020."

Together, these strategic documents guide the Planning, Programming, Budgeting and Execution (PPBE) Process, the Joint Capabilities Integration Development System (JCIDS), and the Defense Acquisition System (DAS). These three elements work together as decision support mechanisms to support the *National Military Strategy*.[7] They encompass the Department of Defense's current procedure to define and adjudicate deliberate requirements and associated acquisition criteria for future defense programs.[8] This capability-based approach relies on Combatant Commander- and Service Chief- identified capability gaps. Those gaps are based on their respective analyses of the national strategy, specified priorities, and known economic constraints, as compared to existing capabilities.[9] The key question, then, is whether this capability-based approach is effective in obtaining the best value for the nation's dollar with respect to capabilities and resources. This paper will analyze the

current methodology used to determine military requirements and resource them, then offer potential ways to improve these processes.

Past and Present

Under the old threat-based planning approach, the military services were the primary drivers of the acquisition system. Each service used its own strategic vision and requirements as the basis for developing and fielding strategic solutions. This bottom-up method proved expensive because integration of various solutions occurred late in the process, if at all, resulting in competing, duplicate, and parochial capabilities.[10] In contrast, the capability-based planning approach originates from a centralized national strategy. The *National Security Strategy* serves as the foundation for a series of subordinate defense and military strategies, coordinated among the Service Chiefs and Combatant Commanders. During capabilities-based assessment, strategic guidance determines "needs", a comparison of those needs with current capabilities identifies "gaps" and associated "problems and risks", and results in possible "solutions" which leaders must gauge against national interests and priorities.[11] The intent of the current process is to generate jointly-coordinated support to national strategic needs, with overall costs and benefits weighed throughout the process so that "what had been a culture of endless money... become[s] a culture of savings and restraint."[12]

The executive branch published the current *National Security Strategy of the United States* in 2010, and it serves as the foundation for subordinate strategic documents. In it, the President reinforced the United States' national values and outlined threats to national security, including domestic economic and education concerns, as well as international threats "from nations, nonstate actors, and failed

states."[13] He specifically addressed the need for diplomatic, informational, and economic efforts to complement military underpinnings of national security, and expressed an expectation that "burdens... cannot fall on American shoulders alone."[14] Overall, the document addresses a wide variety of topics which bear on national security in both direct and oblique ways, and provides overarching priorities to ensure that "America is stronger, more secure, and... able to overcome our challenges...."[15]

The *National Military Strategy of the United States of America* provides the ways and means by which the military will support enduring national interests articulated in the *National Security Strategy* and defense objectives outlined in the *Quadrennial Defense Review*. It describes the strategic environment, outlines trends and how military forces will address them, provides priorities among regional and functional capabilities, and articulates risk to the strategy.[16] This publication acknowledges the impact of economic constraints, and distills the broad terms of national security into required capabilities for each of the services. Combatant Commanders, Service Chiefs, and other senior leaders use the *National Security Strategy* and the *National Military Strategy* to determine specified and implied capabilities, then compare those requirements to existing and near-term capabilities to determine risk. The Chairman of the Joint Chiefs of Staff uses these analyses to articulate aggregate strategic risk to the nation's defense, advise the President of the United States, and provide unified direction for the Armed Forces as required in the Joint Strategic Planning System.[17]

Finding Tangible Solutions

Unfortunately, neither the *National Security Strategy* nor the *National Military Strategy* provide details about required capabilities or capacity, so leaders must determine how to support them. Combatant Commanders and Service Chiefs identify

capability gaps through analysis of the national strategy, specified priorities, and known economic constraints. Although they subscribe to the principle of serving the greater good, it is common for them to disagree about the ways and means to achieve defense ends. Jointly, they must prioritize the most critical gaps to fill, then seek to fund and build the required material solutions. Senior leaders receive information for consideration through the combined efforts of the PPBE Process, the JCIDS and the DAS. Although not directly linked, these three sub-elements (Figure 1), are aligned and meant to work together as decision support mechanisms for the Secretary of Defense.[18] Their interaction is critical to the efficiency and effectiveness of the capability-based approach.

Figure 1. DoD Decision Support Systems[19]

The Deputy Secretary of Defense oversees the PPBE process, designed to ensure efficient resource allocation aligned with the *National Security Strategy*. Because it is budget-focused, the PPBE process serves as a driver for both the JCIDS and DAS. Planning is a collaborative effort between the Office of the Secretary of

Defense and the Joint Staff, in coordination with Department of Defense components,[20] and is based on the Secretary of Defense's strategic plan for developing and employing future forces. Published in January 2012, "Sustaining U.S. Global Leadership: Priorities for the 21st Century Defense" serves as the most recent Defense Strategic Guidance. The Secretary, with input and recommendations from the Chairman, Joint Chiefs of Staff, also releases the Defense Planning Guidance, which provides further details to help guide the development of the Services' Program Objective Memoranda (POMs). Programming begins with the development of a POM, designed to provide a balanced set of programs which both support the required strategy and fit within fiscal constraints. The POM provides details for the next five years for each program, including a timeline of resource allocation for forces, funding, and manpower. Budgeting overlaps with programming, and converts the by-program information into a format used for Congressional appropriation, including required justification documents. The execution phase occurs simultaneously with the program and budget reviews (albeit involving different fiscal year budgets), and provides feedback to senior leadership concerning effectiveness of past and current resource allocations. If actual performance deviates significantly from the plan, the execution review may recommend resource adjustments or program restructuring. In extreme cases, programs may be cancelled as a result of sustained performance problems.[21]

Through PPBE, the military departments, defense agencies, and the Joint Staff provide budget recommendations to the President through the Secretary of Defense. The resulting Presidential Budget contains the Commander in Chief's request to Congress for acquisition of required defense capabilities. The President submits the

budget to Congress, where the authorization and appropriations committees review it and receive testimony from key members of the Department of Defense. Even when working smoothly, the process of testimony, adjudication, appeal, and Congressional approval takes six months or more before the President receives the final product, including Congressional adjustments, for review and approval or veto signature.[22]

The Joint Requirements Oversight Council (JROC) assists the Chairman of the Joint Chiefs of Staff in fulfilling his statutory responsibility to provide advice to the President concerning requirements, programs and budgets. The Vice Chairman of the Joint Chiefs of Staff chairs the JROC, and is supported by general and flag officers from each service, affected Combatant Commanders, and civilian advisors from policy, budget, and other key governmental staff. The council recommends approval and funding for capability requirements which align with a priority, core mission and represent an appropriate combination of cost, schedule, and performance. In doing so, the JROC provides the Secretary of Defense with appropriate ways to shape the joint force to meet identified strategic defense requirements[23] in support of the *National Security Strategy*.

Under the Vice Chairman of the Joint Chiefs of Staff, JCIDS plays a key role in identifying required joint war fighting capabilities. Created to support the JROC and the Chairman in their advisory roles, JCIDS is a capabilities-based approach designed to improve overall effectiveness and efficiency by replacing service-specific, parochial processes that planned independently and created redundant, competing, and expensive solutions for identified capability gaps. In some cases, solutions to Service Chiefs' and/or Combatant Commanders' articulated gaps may be non-material in nature

(e.g., changes in policy, procedure, organization, or a relatively minor modification to existing technology). But in other cases, a gap may require a material solution (e.g., new equipment). The process follows a proscribed method to analyze existing capabilities, including assessments of available or developing technologies and possible commercial-off-the-shelf options, then matches material solutions to capability requirements.[24] Those gaps requiring a material solution, or a combination of material and non-material solutions, will generate an Initial Capabilities Document (ICD) to formally establish the need. "The ICD identifies a capability gap or other deficiency in terms of the functional area, the relevant range of military operations, and the timeframe. The ICD describes the evaluation of DOTMLPF approaches,"[25] supports an Analysis of Alternatives, and eventually, a Milestone A decision within the DAS.

Unfortunately, JCIDS has shortcomings. First, although the cadre of trained acquisition professionals has expanded over the last ten years, the operational field force lacks the ability to define the parameters of a newly-required capability in terms that acquisition personnel can use to screen the new "need" against existing or emerging technologies.[26] Second, it takes too long to meet all of the legal and regulatory steps to generate and validate a requirement. The bureaucracy designed to ensure proper oversight of the acquisition system is partially preventing it from moving forward at a reasonable pace.

The JROC has already implemented some changes which have improved the speed of the JCIDS process. These include limiting the length of key capabilities documents required to achieve milestones, adding Combatant Commanders and civilian advisors to the JROC from key departments such as Under Secretary of Defense

(Acquisition, Technology, & Logisitics) (USD(AT&L)), policy, and budget, and limiting other JROC meeting attendees to those specifically designated or invited by the Vice Chairman of the Joint Chiefs of Staff. Doing so has improved the linkage between Service Chiefs, Combatant Commanders, and key governmental policy makers. While it is too soon to determine the long term effect, it has improved the ability of the council members to conduct frank discussions about difficult choices.[27] These changes have helped streamline the JCIDS process, but there is still room for improvement. Additional suggestions follow later in this paper.

Once the Milestone Decision Authority approves Milestone A (or later, as appropriate), a program transitions from JCIDS (identification of requirements) to DAS (acquisition of a material solution). The USD(AT&L) oversees the DAS process to acquire major weapons systems in support of joint capability requirements.[28] The Defense Acquisition Board (DAB) is the Department of Defense's senior-level forum for advising the USD(AT&L) on critical decisions concerning major defense acquisition programs. The USD(AT&L) chairs the board, which consists of the Vice Chairman, Joint Chiefs of Staff, Service Secretaries, Under Secretaries of Defense (Comptroller, Policy, and Personnel and Readiness), the Assistant Secretary of Defense for Network Integration, and the Directors of Operational Test and Evaluation and Cost Assessment and Program Evaluation. Supporting senior advisors may include the DoD Component Acquisition Executives, the Director of Defense Procurement and Acquisition Policy, and others invited by the USD(AT&L).[29]

This process runs concurrently with JCIDS (Figure 2),[30] and supports material solutions for major weapons programs identified in the ICD. The series of milestones,

tests, and reports which underpin the process also ensure that programs adhere to statutory requirements. Generally, the level of scrutiny increases with the cost of the program, and there are special requirements for weapon systems and automation systems.[31]

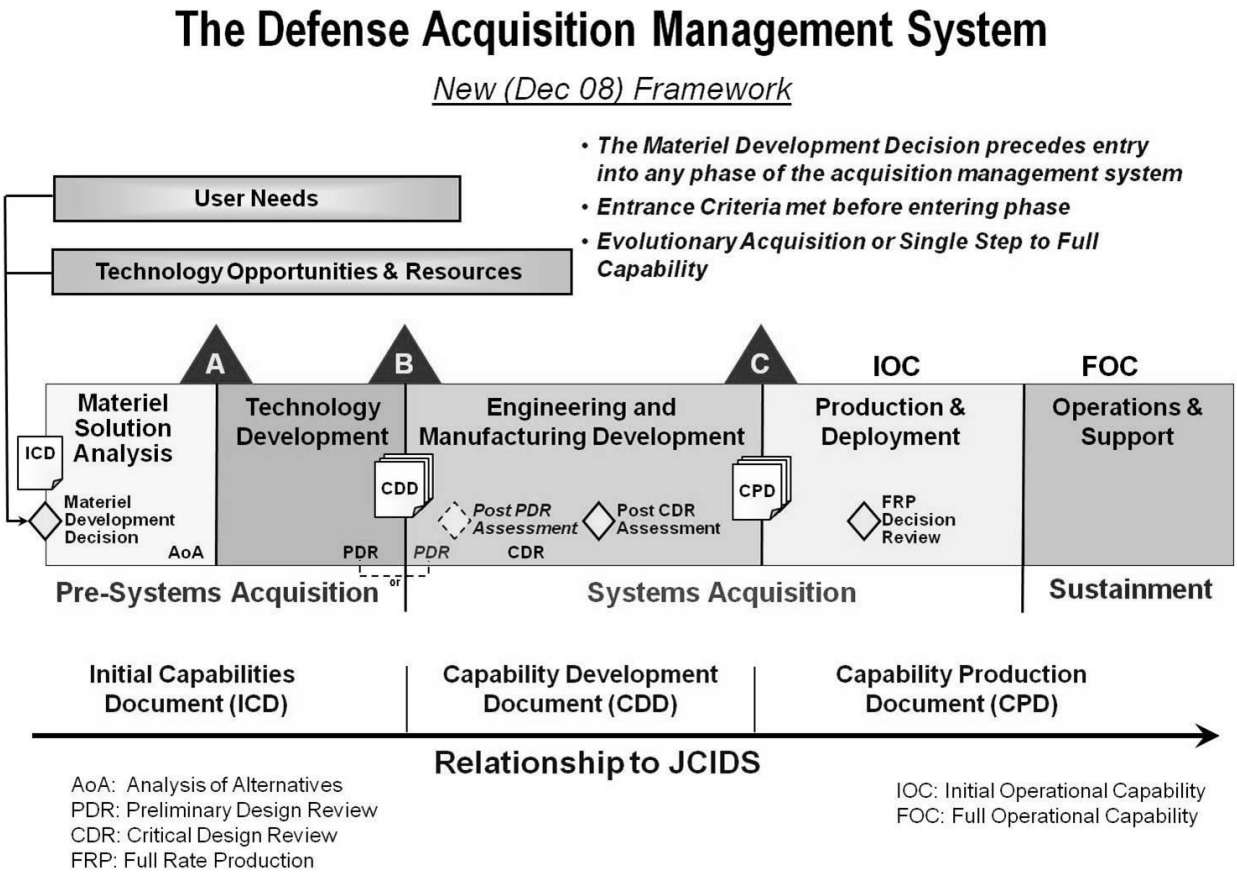

Figure 2. The Defense Acquisition Management System[32]

For major defense acquisition programs and automation solutions subject to Office of Secretary of Defense oversight, the material solution must continue to undergo specific testing, provide detailed documentation, and demonstrate acceptable performance. The Milestone A approval ushers in the technology development phase which matures technologies, develops preliminary designs, and seeks affordable

options, then tests at least two competing prototypes.[33] During this phase, the JCIDS Capability Development Document (CDD) must capture the information necessary to develop a proposed program, specifically, what amount of capability is affordable, useful, logistically supportable, and technically mature. The CDD supports a Milestone B decision review.[34]

The engineering and manufacturing development phase focuses on ensuring an affordable and executable manufacturing process that is operationally supportable, integrated, and interoperable.[35] The JCIDS Capability Production Document (CPD) identifies production attributes for a single increment of a program, including Key Performance Parameters (KPP), performance attributes, and life-cycle costs. The Defense Acquisition Board uses the CPD to measure a contractor's delivery, and is required before a Milestone C decision.[36] When programs require changes in this phase (e.g. KPPs require modification, costs significantly exceed projections), the JROC must meet to evaluate the cause and weigh the cost, benefit, and risk associated with the program. The program cannot move forward until corrections are complete, including required testing and supporting documentation. The production and deployment phase will result in meeting the mission need through initial and full rate production, and sustainment activities. Finally, the operations and support phase overlaps with production and deployment, and ensures cost-effective sustainment along with life cycle management and disposal.[37]

Examples of PPBE, JCIDS, and DAS at Work

Although not directly linked, effective interaction between the PPBE process, JCIDS, and DAS are critical to the long-term success of our acquisition programs. The

following examples reveal some successful and some problematic results for these decision support mechanisms.

In May 2002, after spending nearly $2 billion, Secretary of Defense Rumsfeld announced cancellation of the Army's Crusader Artillery Program. This is an example of a program that ended because of a strategy/planning to capability mismatch, meaning that it no longer supported a critical joint capability for the future force. Secretary Rumsfeld explained, "This decision is not about any one weapon system, but merely about a strategy of warfare, a strategy that drives the choices that we must make about how best to prepare our total forces for the future."[38] The Crusader was the first major program that Secretary Rumsfeld cut, demonstrating a developing, positive resolve to end programs that do not clearly support a compelling strategic need. The problematic question remains, why did it take several years and nearly $2 billion to determine that the program would not fill a critical strategic capability gap?

In a Pentagon news conference in January 2011, Secretary of Defense Gates revealed changes to various programs in order to improve both budget efficiency and operational effectiveness. He indicated that although the Air Force and Navy portions of the F-35 Joint Strike Fighter program were on track, that testing problems in the short take-off and landing variant would result in "the equivalent of a two-year probation.... if we cannot fix this variant during this time frame and get it back on track in terms of performance, cost and schedule, then I believe it should be cancelled."[39] This public rebuke and warning signaled inculcation of a new acquisition culture. Unlike the pattern the Comanche followed (discussed next), the good news is that existing programs will face sanctions or cancellation if they cannot meet cost, schedule, or performance

standards. Unfortunately, this begs the question, why is a two year probation period considered appropriate before considering cancellation?

In February 2004, following more than 20 years of development and nearly $7 billion invested, the Army cancelled the Comanche Helicopter Program and proposed reprogramming the remaining $14.6 billion in the program to support modernization and refurbishment of existing helicopters and procurement of unmanned aircraft. The cancellation demonstrated both good and bad points of the acquisition system. Because senior military leaders determined that the Apache helicopter was still "good enough" technology to defeat our nearest adversary for many years to come, the capability-based system worked. It identified the Comanche as a want, rather than a critical need. But the decades-long lifespan of the program demonstrated critical issues with both the bureaucratic requirements and acquisition phases of the system.

The overly-bureaucratic rules and regulations which govern requirements, testing, and documentation in order for a program to advance contributed to extensive delays in the Comanche program. Some technologies failed to mature as expected, while others developed or advanced faster than planned. The actual speed of emerging technologies meant that Comanche requirements underwent mid-stream changes, and each change drove another loop of time-consuming requirements, testing, and documentation. These multiple loops contributed to significant cost overruns. The resulting delays and exorbitant cost contributed to the death of the Comanche program in favor of refurbishment and use of mature technology with immediate application toward new strategic gaps. Together, the cancellation of the Crusader and Comanche

programs reflected "a growing realization in the Pentagon that the military has more big-ticket weapons projects in the works than it can afford...."[40]

At about the same time, the Army cancelled procurement of the surface-to-air missile and the non-line-of-sight launch system, and Secretary Gates pointed to these efficiencies as a way to consolidate information technology.[41] This cancellation was a result of the Army adopting a more holistic means to assess needed capabilities through a capability portfolio review (later adopted by the JROC). Instead of looking at individual systems, a portfolio review allows decision makers to evaluate capabilities across a grouping of related systems and capabilities. Doing so helps save money, prevent duplicity, and still allow for appropriate interdependency and redundant capability across the joint force.[42] These changes should produce cost savings to allow the services to modernize existing equipment and pursue more limited procurements and represent an approach that should be continued in future acquisition decisions.[43]

Why Isn't The New System Working?

There are four major reasons why the new, capability-based system is still not working well. First, despite an agreed-upon, national strategy, competition for scarce resources has exposed seams between services. In practice, the application of the capability-based approach appears to be a hybrid of the old and new ways of doing business. As a result of the switch from a threat-based to a capability-based approach, the Services are less likely to offer unconstrained or parochial requests. Instead, the JROC process leads senior military leaders to recommend coordinated programs based on the *National Security Strategy.* But because the PPBE process must "craft plans and programs that satisfy the demands of the National Security Strategy *within resource constraints* [emphasis added],"[44] the entire process is still governed by how much

capability the nation can afford. The key is to ensure that recommended programs are directly related to filling a compelling strategic gap, fulfill a holistic need across the joint force, and offer appropriate, limited redundancy within a portfolio of related capabilities.

Second, the lengthy amount of time required to validate, develop, and procure key capabilities is a major liability which leaves programs vulnerable to a host of external variables. Unlike the cancellation of the Crusader Artillery Program, the Comanche's cancellation occurred after approximately 20 years. The underlying issue for the Comanche was the amount of time invested in the program and spiraling costs as a result of mid-stream changes to the platform.[45] The time to field key capabilities is partially a result of testing, reporting, and budget oversight requirements specified in the PPBE-JCIDS-DAS process. While these decision support processes help ensure that the government uses a deliberate process to purchase the best mix of capability, speed, and cost, the bureaucratic nature of the system is inherently time-consuming. In a time of rapidly-changing technology, it is unacceptable for a process to take a decade or more to generate a capability. The half life of technology is short enough that doing so means that by the time an item can be procured, it has undergone so many changes that the cost per unit has skyrocketed, it has become obsolete, or both.[46] Following the process is actually stifling technology acquisition instead of enabling it.

One Congressional reform that has improved the process is the Weapon Systems Acquisition Reform Act of 2009.[47] It required changes in organization and personnel, acquisition policy and process, and Congressional reporting. In formulating requirements, some positive outcomes include Combatant Commanders' input to the JROC and mandatory consideration of cost, schedule, and performance tradeoffs.

Acquisition strategy improvements include mandatory competition in prototyping prior to Milestone B, unless unaffordable or against national security interests. And finally, amendments to cost-growth reporting include positive changes such as mandatory thresholds at which cancellation or restructuring must be considered. Although these steps help ensure better coordination among the phases of the acquisition process and guarantee reasonable Congressional oversight, more still needs to be done.

Third, both the acquisition system and the Services need more and better trained personnel. Although leaders receive training prior to assuming positions as a Contracting Officer, Program Manager, or a Program Executive Officer, the training is compressed and assignment cycles do not always allow for sufficient field training prior to assumption of key positions. In order to address, this, the Army has recently added Non-Commissioned Officers to its acquisition force, but it will take time to mature their skills, and any assessment of their value would be premature at this time.

In the operational force, there is no cadre of trained personnel who know how to write clear and accurate capability requirements based on operational input.[48] Writing requirements is naturally tricky because it requires the ability to distill a required capability into discrete elements such as size, weight, and portability, as well as performance elements such as speed, capacity, resistance to external influences, etc. Additionally, the process must attempt to account for near-term or mid-term future technological advances. It is very difficult to know if technology can develop fast enough to create a particular solution, and if there is a mismatch, the ensuing changes will cause delays and cost increases which could not have been foreseen.[49]

Fourth, the interrelation between the elements of the strategy, politics, and budget is complex and outside the control of the Department of Defense. Even when the national strategy is clear, the political implications of defense acquisitions and the associated appropriations are complicated. Civilian control of the military and Congressional oversight of expenditures is the norm, but when budget pressures force choices between domestic programs and national defense programs, members may have difficulty endorsing choices which do not serve the best interest of their respective constituents. A second issue involves ongoing gridlock between the President and Congress, and between the Houses of Congress. These issues have prevented completion of the normal budget process, and without specific defense appropriations, existing programs can run out of authority to spend, and no new programs may begin.

In a briefing to the U.S. Army War College last fall, Chairman Dempsey emphasized that "we must resolve our budget issues because our national defense hangs in the balance."[50] The President's budget submission to Congress that year, albeit later than the statutory requirement, requested authorization and appropriation of funding for specified capabilities. Subsequent Congressional failure to pass a budget that year (and indeed, in the past several years) coupled with entrenched disagreement between the major political parties has resulted in a series of Continuing Resolutions, stalling many procurement efforts until approval of late, omnibus or consolidated defense appropriations bills.[51] Despite administrative efforts to improve the acquisition system, the political portion of the triad has proven dysfunctional. Delays in the political process impacts the budget, and ultimately, the effectiveness and efficiency of the process as a whole.

Some Ideas to Reform The System

To minimize competition for resources, the national strategy and the plans for the joint force to support it must remain the litmus test for defense programs. Despite a desire to do what is right for the nation as a whole, senior leaders will have genuine disagreements about what ends are critical and about the best ways and means to achieve them. After agreeing that a material solution is necessary to fill an identified gap, Service Chiefs will naturally want to promote their respective strengths to ensure service dominance in a particular domain, but they must set aside parochialism in order to achieve genuinely integrated solutions. The good news is that there are an increasing number of cases in which military services are willing to share resources and become more interdependent to improve overall efficiency and effectiveness.

Admiral Winnefield, the Vice Chairman of the Joint Chiefs of Staff, recently offered insight into upcoming changes which will clarify strategic defense priorities in terms of national security interests derived from overall U.S. national interests. The six, in order are: survival of the nation; security of the global economic system; prevention of catastrophic attacks on the nation; secure, confident, and reliable allies and partners; protection of American citizens abroad; and preservation and extension of universal values.[52] This provides a framework for senior leaders to assess the relative importance and risk associated with the use of force, as well as the criticality developing solutions to identified capability gaps. The higher an item falls on the list, the more compelling the need. In fiscally constrained times, a framework such as this will help the JROC to objectively evaluate a potential solution by its relative importance to national security. This methodology should also help prevent an existing but mismatched program from continuing to receive funding.

An example of how agreement on the priority of critical required capabilities can overcome potential parochialism among the Services has recently played out with the emerging Air-Sea Battle concept. Air-Sea Battle provides a way to combat threats from sophisticated anti-access and area denial systems such as ballistic and cruise missiles, submarine, mines, and cyber or anti-satellite attack.[53] When combined with the strategic rebalance to the Pacific, the services could end up vying for position and relevance. But in May 2012, General Schwartz, then Chief of Staff of the Air Force, emphasized that services must resist parochialism and cooperate more during times of fiscal constraint.[54] He said, "Air-Sea Battle is a... concept consistent with the globalized environment; it is agnostic with regard to specific regions of the world and is intended to assure access wherever our wide-ranging strategic interests are located."[55] Rather than compete for resources, he and his Navy counterpart acknowledged that they would be willing to sacrifice capacity in order to retain key capabilities, even if doing so meant becoming more interdependent. Admiral Greenert asked, "Why should I be buying this [technology] if the Air Force is buying it? Well, maybe we should buy it together. Maybe we should let them operate [it], or the Army, or the Marine Corps. Where does this make sense?"[56] It has been uncommon for service chiefs to openly advocate buying less and instead planning to share resources, but doing so is simply an acknowledgement that fiscal constraints will continue, and in such an environment, cooperation on agreed upon critical capabilities best serves the national interest. To better incentivize this behavior, use of the strategic framework for investment priorities, in concert with the portfolio review concept discussed earlier, will serve to better highlight programs and capabilities that are the most critical to achieving national and

military strategic objectives. This should increase willingness to accept interdependence and cooperatively seek efficiencies to help ensure effectiveness while preempting overt bureaucratic or parochial behavior.

Second, the amount of time it takes to properly complete deliberate acquisition is another major hurdle. In his briefing to the Army War College, the Chairman of the Joint Chiefs of Staff described the amount of time required to field new systems as "excessive and unacceptable."[57] The process is cumbersome, budget overruns are common, and if not cancelled due to excess cost, items may be approaching obsolescence by the time fielding occurs.[58] Federal Acquisition Regulations govern procurement, and the PPBE process, JCIDS, and DAS proscribe various testing, milestones, and approvals. Although designed to foster oversight and good stewardship, these confusing and bureaucratic regulations and procedures actually frustrate the process and cause costs to skyrocket.

Past changes in the acquisition system removed military scientists and specialists from much of the process, leaving "lawyers, accountants and political appointees [who] lack the judgment based on military experience"[59] to evaluate equipment suitability and performance. The extensive piecemeal design reviews and component testing did not fare well for the F-22 oxygen system. Although its parts successfully navigated the required steps, when employed with the pilot's flight vest, the oxygen system failed to operate properly.[60] The Services need to address this issue by developing and sustaining a cadre of both uniformed and civilian acquisition professionals who are suitably trained and have the requisite experience to do these types of evaluations, and then empower them to do so.

The Federal Acquisition Regulation and the Defense Federal Acquisition Regulation need significant restructuring to meet 21st century needs. The "half life of technology" is about six months,[61] so a process which requires multiple years to complete will produce outdated equipment unless there are design and technology updates along the way. Unfortunately, such changes compel another series of design reviews, testing, and milestone approvals. "The process, not the product for the war fighter, has become the principal focus of the acquisition system."[62] In its 2012 report to the Secretary of Defense, The Defense Business Board pointed out that the current system prefers oversight rather than accountability, and that the interaction between PPBE, JCIDS, and DAS is still too stove-piped. The report recommended that "the entire system be 'zero-based' including all directives and regulations..." with the burden to prove a compelling need for keeping or establishing a requirement.[63]

Third, the military services need a trained cadre of personnel throughout the force to accurately and thoroughly delineate a new requirement. In their examination of the defense acquisition enterprise, the Business Executives for National Security underscored the need for more and better trained personnel. Their study found that key personnel lacked the expertise to properly articulate requirements at the beginning of a program. Additionally, there is a weak link between war fighters, engineers, and financial experts throughout the process.[64] Without an accurate requirements statement, mid-stream changes become more likely. Without a strong connection between the user, the producer, and the financier, cost overruns become more likely. And without the ability to clearly explain the time and cost effects of mid-stream changes, senior leaders cannot properly evaluate the balance of project timeliness,

cost, and risk. To begin to correct this, training and assignment cycles for acquisition professionals needs to be implemented earlier in the career path to allow time for mature skills prior to assumption of key positions, and field force personnel need basic training concerning how to write requirements statements.

In a move akin to including civilian advisors as part of the JROC, perhaps integrating military advisors as part of the DAB would help temper the bureaucratic, administrative reflex with operational expertise. In addition to developing a deeper bench of acquisition professionals and lay persons throughout the force, streamlining regulations and "remilitarizing" the process would help speed up procurement yet still allow for sound judgment, prudent risk-taking, and appropriate program oversight.

Finally, politics is a much more difficult problem to address. Members of Congress will likely continue to seek acceptable solutions which benefit their constituents, either through increased federal projects or by retention of programs which otherwise might be cut. This self-preserving behavior can be detrimental, but the real problem is the effect it has on authorization and appropriations processes. When legislators fail to focus on the good of the whole and become entrenched in parochial positions, very few projects receive approval or appropriated funds in a timely manner.

Unfortunately, there is no simple solution to the political impasse. Prolonged federal budget problems portend continued difficulty securing approvals and appropriations for defense procurement. One key to success will involve early coordination between the Department of Defense and key decision-makers, particularly the Charimen and Ranking Members of the Senate and House Armed Services Committees. All parties must clearly understand the basis for the requirement and the

risk presented by a continued gap in terms of severity and time. By knowing and addressing known concerns or objections and exploiting areas of agreement, participants will gain trust with each other and will perform their respective roles more quickly and with faith in the process.

Secretary Gates offered his support of the capability-based approach when he stated, "...not every defense program is necessary, not every defense dollar is sacred or well-spent, and more of everything is simply not sustainable."[65] The Department of Defense accounts for approximately 70 percent of all Federal procurement spending,[66] and in 2011, the Government Accountability Office (GAO) determined that nearly one third of the cost growth of the Portfolio of Major Defense Acquisition Programs was due to inefficiencies.[67] The capability-based approach to support the *National Security Strategy* and the *National Military Strategy* is a significant improvement over the former, threat-based approach. The capability-based approach has reduced service parochialism, improved coordination among participants, and established a testing and accountability mechanism for deliberate procurements, and according to the March 2011, GAO report, newer programs are doing better than programs initiated under previous systems.[68] By improving coordination among participants and approval authorities, removing redundant portions of the process, involving military experts in the testing and evaluation of components and systems, and allowing for reasoned, prudent judgment to prevail, the process could be faster, cheaper, and still offer solutions with acceptable risk. The big question is whether the executive and legislative branches of government are willing to change the status quo. Persistent economic stress may prove to be the motivation that has been lacking.

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